FIG. 1

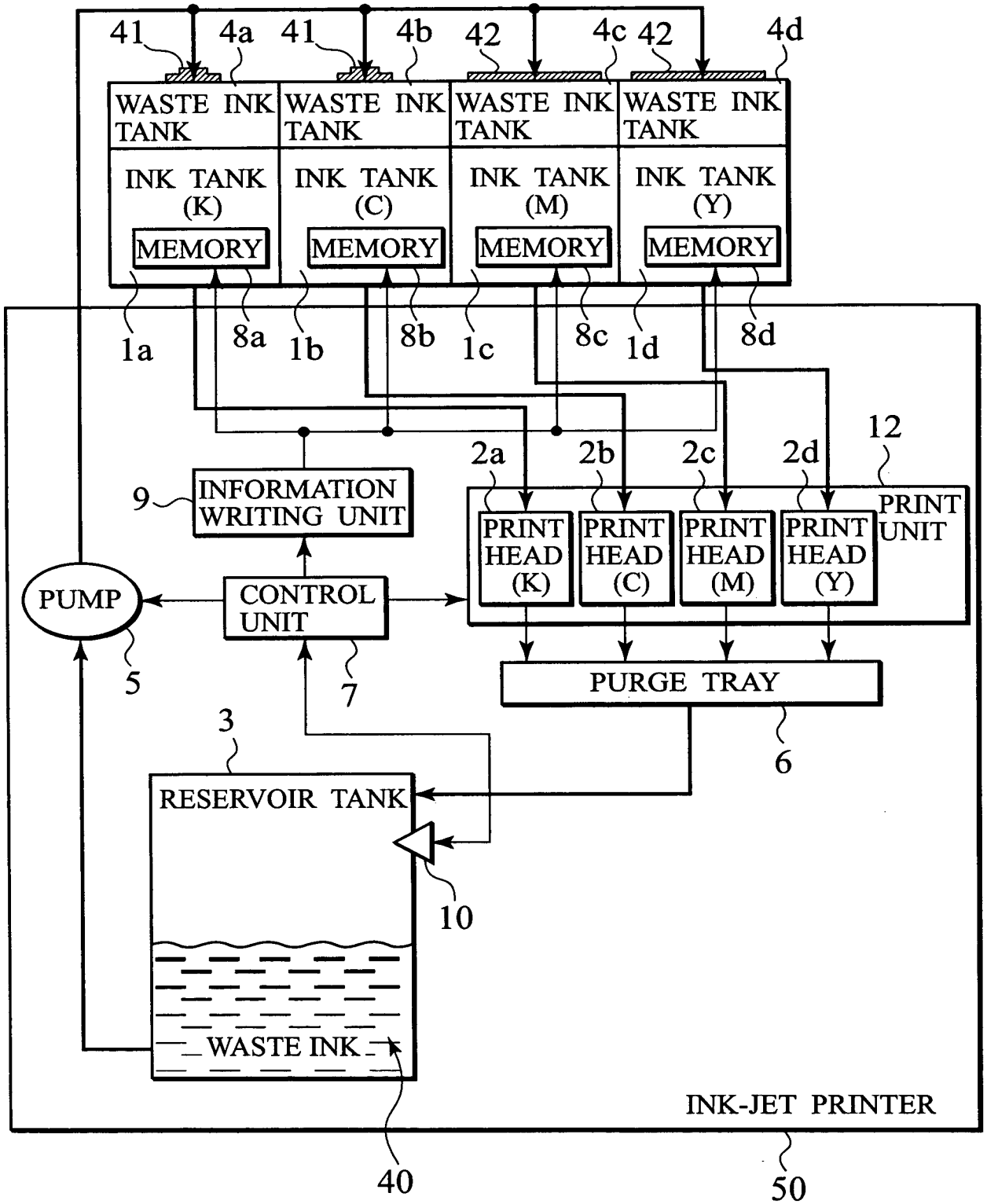

41
4a
41
4b
42
4c
42
4d
WASTE INK TANK
WASTE INK TANK
WASTE INK TANK
WASTE INK TANK
INK TANK (K)
INK TANK (C)
INK TANK (M)
INK TANK (Y)
MEMORY
MEMORY
MEMORY
MEMORY
1a
8a
1b
8b
1c
8c
1d
8d
12
2a
2b
2c
2d
9
INFORMATION WRITING UNIT
PRINT HEAD (K)
PRINT HEAD (C)
PRINT HEAD (M)
PRINT HEAD (Y)
PRINT UNIT
PUMP
CONTROL UNIT
5
7
PURGE TRAY
6
3
RESERVOIR TANK
10
WASTE INK
INK-JET PRINTER
40
50

FIG. 2

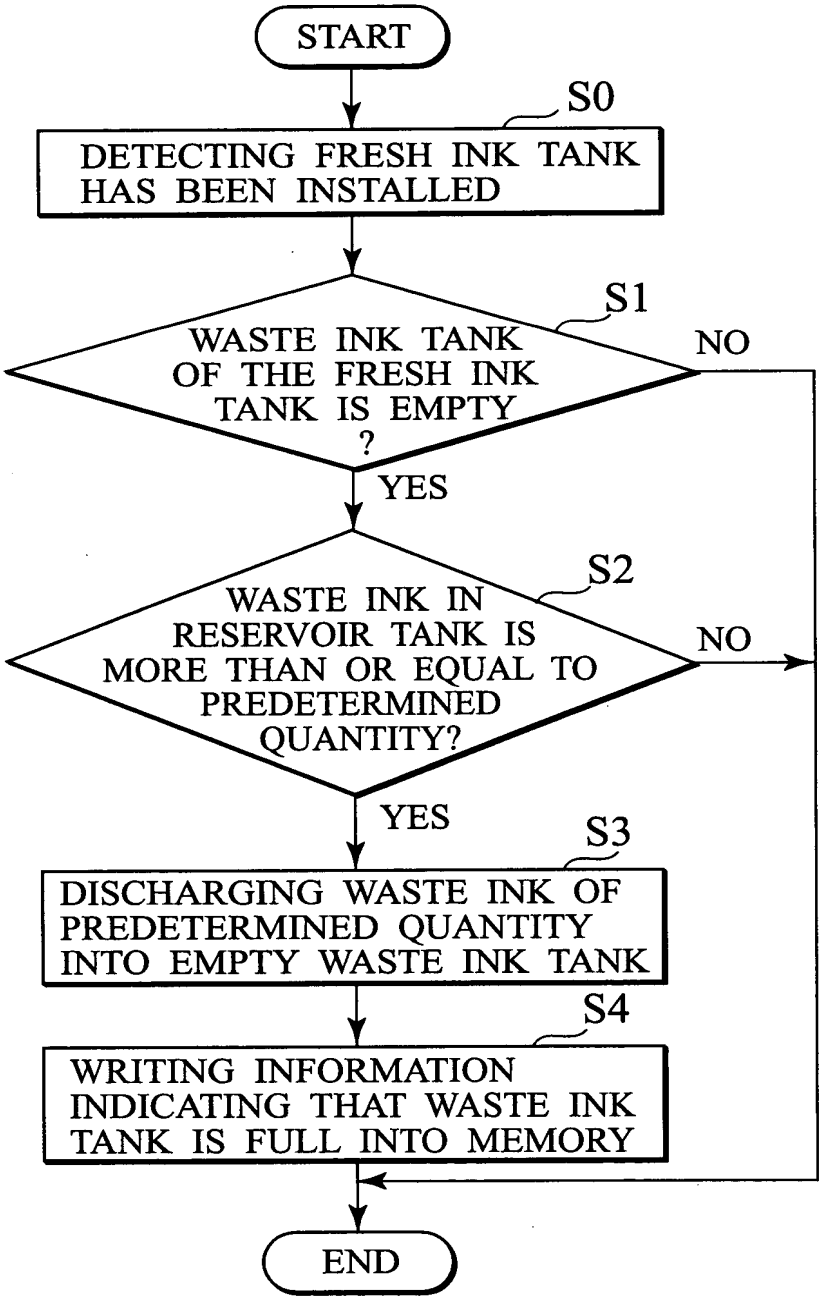

START
S0
DETECTING FRESH INK TANK HAS BEEN INSTALLED
S1
WASTE INK TANK OF THE FRESH INK TANK IS EMPTY ?
NO
YES
S2
WASTE INK IN RESERVOIR TANK IS MORE THAN OR EQUAL TO PREDETERMINED QUANTITY?
NO
YES
S3
DISCHARGING WASTE INK OF PREDETERMINED QUANTITY INTO EMPTY WASTE INK TANK
S4
WRITING INFORMATION INDICATING THAT WASTE INK TANK IS FULL INTO MEMORY
END

FIG. 3

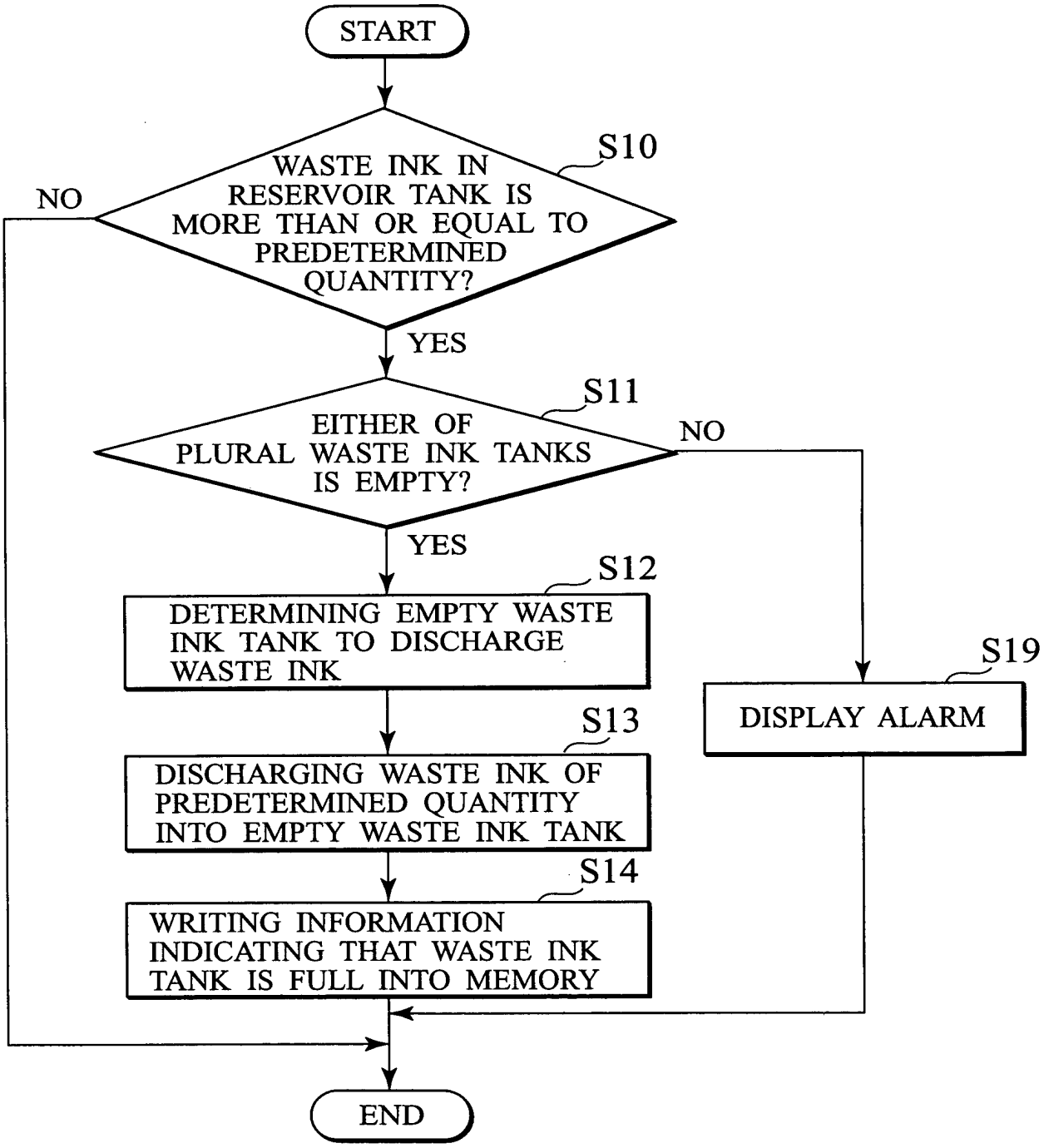

START
S10
WASTE INK IN RESERVOIR TANK IS MORE THAN OR EQUAL TO PREDETERMINED QUANTITY?
NO
YES
S11
EITHER OF PLURAL WASTE INK TANKS IS EMPTY?
NO
YES
S12
DETERMINING EMPTY WASTE INK TANK TO DISCHARGE WASTE INK
S13
DISCHARGING WASTE INK OF PREDETERMINED QUANTITY INTO EMPTY WASTE INK TANK
S14
WRITING INFORMATION INDICATING THAT WASTE INK TANK IS FULL INTO MEMORY
S19
DISPLAY ALARM
END

FIG. 4

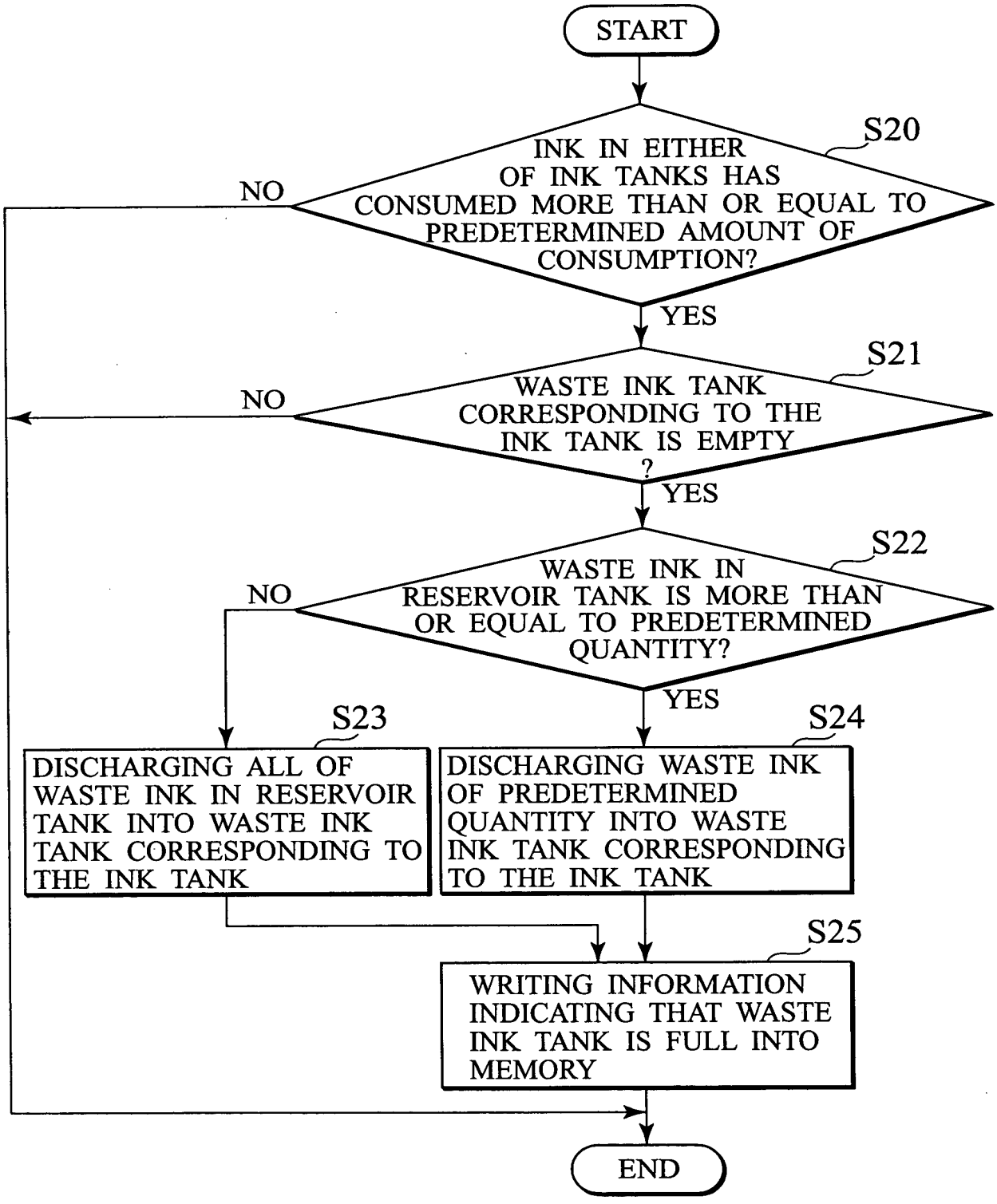

START
S20
INK IN EITHER OF INK TANKS HAS CONSUMED MORE THAN OR EQUAL TO PREDETERMINED AMOUNT OF CONSUMPTION?
NO
YES
S21
WASTE INK TANK CORRESPONDING TO THE INK TANK IS EMPTY ?
NO
YES
S22
WASTE INK IN RESERVOIR TANK IS MORE THAN OR EQUAL TO PREDETERMINED QUANTITY?
NO
YES
S23
DISCHARGING ALL OF WASTE INK IN RESERVOIR TANK INTO WASTE INK TANK CORRESPONDING TO THE INK TANK
S24
DISCHARGING WASTE INK OF PREDETERMINED QUANTITY INTO WASTE INK TANK CORRESPONDING TO THE INK TANK
S25
WRITING INFORMATION INDICATING THAT WASTE INK TANK IS FULL INTO MEMORY
END

FIG. 5

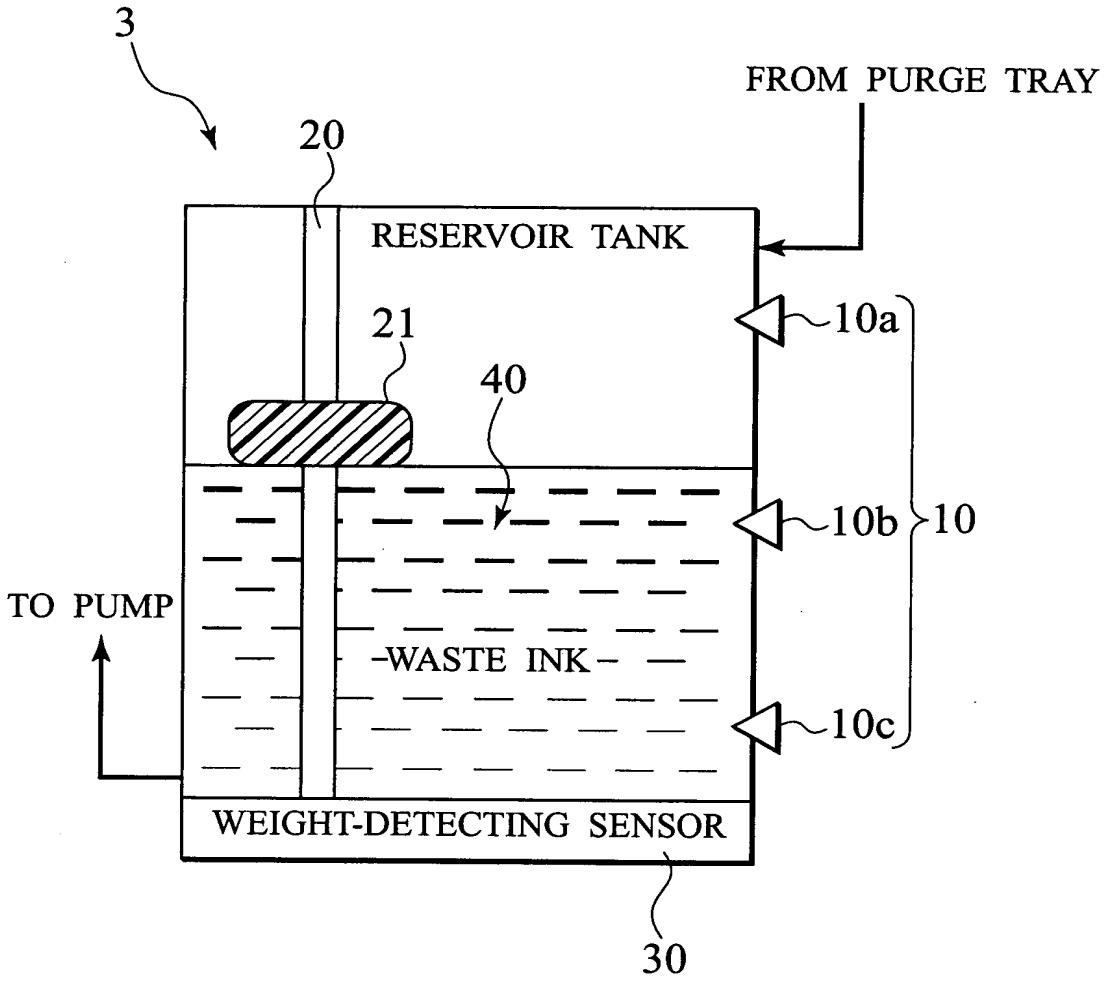
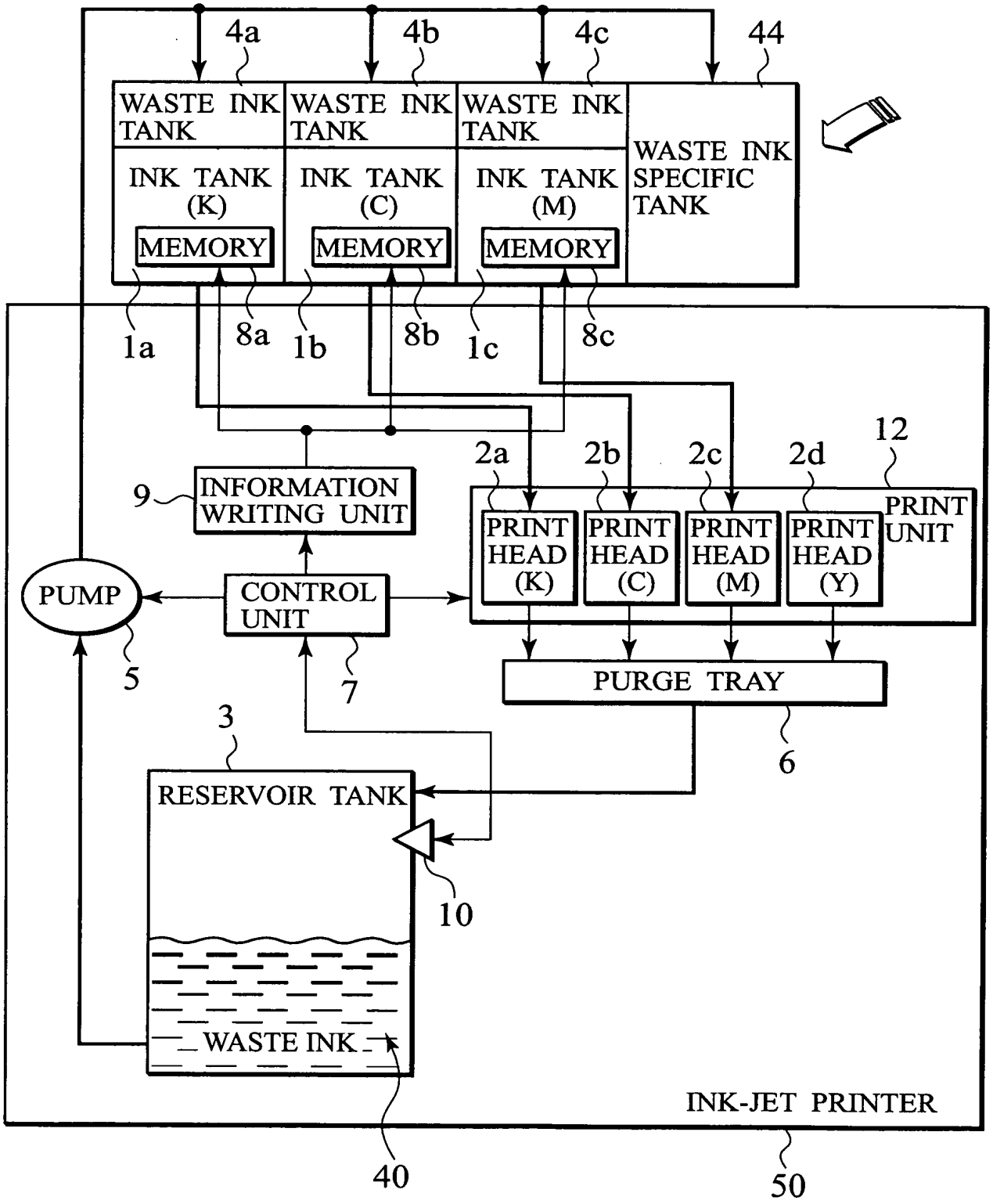

3
20
FROM PURGE TRAY
RESERVOIR TANK
21
40
10a
10b
10
TO PUMP
WASTE INK
10c
WEIGHT-DETECTING SENSOR
30

FIG. 6


4a
4b
4c
44
WASTE INK TANK
WASTE INK TANK
WASTE INK TANK
WASTE INK SPECIFIC TANK
INK TANK (K)
INK TANK (C)
INK TANK (M)
MEMORY
MEMORY
MEMORY
1a
8a
1b
8b
1c
8c
12
2a
2b
2c
2d
9
INFORMATION WRITING UNIT
PRINT HEAD (K)
PRINT HEAD (C)
PRINT HEAD (M)
PRINT HEAD (Y)
PRINT UNIT
PUMP
CONTROL UNIT
5
7
PURGE TRAY
6
3
RESERVOIR TANK
10
WASTE INK
40
INK-JET PRINTER
50